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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,625	03/18/2004	Alessandro Gallitognotta	SAESP059.US02	5807

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TECHNOLOGY & INTELLECTUAL PROPERTY STRATEGIES  
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EXAMINER

DONG, DALEI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/803,625	GALLITOGNOTTA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dalei Dong	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 15, 17-23 and 29-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 15, 17-23 and 29-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. The Amendment filed on May 31, 2006, has been entered and acknowledged by the Examiner.

### ***Response to Arguments***

2. In response to Applicant's argument that the Yasuo reference is not a valid prior art because the present application claims prior to Italian Patent Application filed on November 12, 2001, the Examiner agrees with the Applicant. However, Applicant failed to provide a certified English translation of the foreign priority document and thus the rejection under the Yasuo reference stands pending Applicant providing a certified English translation of the foreign priority document.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4-7, 17, 18, 20-23 and 29-33 rejected under 35 U.S.C. 102(e) as being anticipated by Japanese Patent 2002-313277 to Yasuo.

Regarding to claim 1, Yasuo discloses in Figure 1, a cathode (4) the cathode formed by a cylindrical hollow part closed at first end and open at a second end, wherein an outer and inner surface portion of the cylindrical hollow part includes a layer of getter material (6).

Regarding to claim 2, Yasuo discloses in Figure 1, the cylindrical hollow part is made essentially of metal.

Regarding to claim 4, Yasuo discloses in Figure 1, the layer of getter material (6) is formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium, niobium, hafnium and tantalum.

Regarding to claim 5, Yasuo discloses in Figure 1, the layer of getter material (6) is an alloy that includes zirconium or titanium combined with one or more elements selected among the group of transition metals and aluminum.

Regarding to claim 6, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the

claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding to claim 7, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding to claim 17, Yasuo discloses in Figure 1, a cathode (4), the cathode (4) formed by a cylindrical hollow part closed at a first end and open at a second end, wherein on an outer or inner portion of the surface of the cylindrical hollow part is

present a layer of getter material (6), and wherein a portion of the surface near the first end of the cathode (4) is free of the layer of getter material (6).

Regarding to claim 18, Yasuo discloses in Figure 1, the cylindrical hollow part is made essentially of metal.

Regarding to claim 20, Yasuo discloses in Figure 1, the layer of getter material (6) is formed of a metal selected among the group consisting of: titanium, vanadium, yttrium, zirconium, niobium, hafnium and tantalum.

Regarding to claim 21, Yasuo discloses in Figure 1, the layer of getter material (6) is an alloy that includes zirconium or titanium combined with one or more elements selected among the group of transition metals and aluminum.

Regarding to claim 22, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In *re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding to claim 23, please note that the claimed method steps are product by process limitations. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of product. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Furthermore, it is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an obvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding to claim 29, Yasuo discloses in Figure 1, a portion of the surface near the second end is at least partially covered by the layer of getter material (6).

Regarding to claim 30, Yasuo discloses in Figure 1, the getter layer (6) is present on the inner portion of the surface.

Regarding to claim 31, Yasuo discloses in Figure 1, the getter layer is present on the outer portion of the surface.

Regarding to claim 32, Yasuo discloses in Figure 1, the getter layer (6) is present on the inner and outer portion of the surface.

Regarding to claim 33, Yasuo discloses in Figure 1, a portion of the surface near the second end of the cathode is free of the layer of getter material (6).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 2002-313277 to Yasuo in view of U.S. Patent No. 5,856,726 to Evans of record.

Regarding to claim 3, Yasuo discloses in Figure 1, a cathode (4) the cathode formed by a cylindrical hollow part closed at first end and open at a second end, wherein



an outer and inner surface portion of the cylindrical hollow part includes a layer of getter material (6).

However, Yasuo does not disclose the metal includes material chosen from among the group consisting of nickel, molybdenum, tantalum and niobium.

Evans teaches in Figures 1 and 2, a cathode (28), formed by cylindrical hollow part made of metal material chosen from among the group consisting of nickel, molybdenum, tantalum and niobium (see column 4, lines 27-32) for the purpose of achieving high conductivity and high temperature durability.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilize the electrode material of Evans for the cathode of Yasuo in order to achieve high conductivity and high temperature durability.

Regarding to claim 19, Evans teaches in Figures 1 and 2, the metal includes material chosen from among the group consisting of nickel, molybdenum, tantalum and niobium (see column 4, lines 27-32) and the motivation to combine is the same as above.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 2002-313277 to Yasuo in view of U.S. Patent No. 3,582,702 to Almer of record.

Regarding to claim 15, Yasuo discloses in Figure 1, a cathode (4) the cathode formed by a cylindrical hollow part closed at first end and open at a second end, wherein

an outer and inner surface portion of the cylindrical hollow part includes a layer of getter material (6).

However, Yasuo does not disclose the layer of getter material is less than 20 microns thick.

Almer teaches a cathode with a getter layer of less than 20 microns thick (see column 4, lines 56-58) for the purpose of improving gas binding.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have manufactured the getter layer of Yasuo with thickness of less than 20 microns of Almer in order to improving gas binding.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (571)272-2370. The examiner can normally be reached on 8 A.M. to 5 P.M..

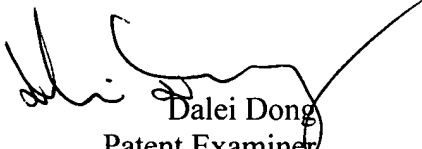
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571)272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.D.

August 18, 2006



Dalei Dong  
Patent Examiner  
Art Unit 2879